

Teacher Training

Diffraction - Protein Crystallography

26-30 June 2017

Monday - June 26

8:30 WELCOME - Course purpose and Goals
8:45 Introduction to protein purification
10:00 Break
10:15 Introduction to Crystals and Crystallization Methods
12:00 Lunch
13:00 Laboratory - Grow your very own protein crystal
17:00 Summary of the Day

Tuesday - June 27

8:30 What is a Synchrotron
9:30 Introduction to Cryo-protection - Do we really need it
10:15 Break
10:30 Diffraction - How does it allow us to determine the molecular structure
11:30 Insync - What is it? How to apply for beam time?
12:00 Lunch
13:00 Laboratory - Crystallization and Cryo-protection
17:00 Summary of the Day

Wednesday - June 28

8:30 Introduction to data collection
9:15 Small Angle Scattering and alternative method for low resolution structure determination
10:00 Break
10:15 Beam line Practical: Data Collection group 1 (group 1a AMX group 1b FMX)
10:15 Introduction to Data Analysis group 2
11:45 Lunch - group 2
12:15 Lunch - group 1
12:15 Beam line Practical: Data Collection group 2 (group 2a AMX group 2b FMX)
13:00 Introduction to Data Analysis group 1
14:00 Practical: Data Analysis basics - from the diffraction pattern to scaled data
17:00 Summary of the Day

Thursday - June 29

8:30 X-ray Absorption Spectroscopy
9:30 Practical: Data Analysis - Molecular replacement
10:30 Break
10:45 Practical: Data Analysis - Molecular replacement optional Anomalous Scattering
12:00 Lunch
13:00 Practical: Data Analysis - Molecular replacement optional Anomalous Scattering
15:00 Break optional
17:00 Summary of the Day

Friday - June 30

8:30 X-ray Imaging
9:30 Presentation by participants - Summary of what you learned this week
10:45 Break
11:00 Proposal submission Do's and Don'ts
12:00 Lunch
13:00 Adjourn